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ABSTRACT

This study examined faculty characteristics and teaching environments of higher education institutions that may hinder or facilitate student-centered pedagogical practices derived from feminist theory. Feminist pedagogy generally advocates democratizing the classroom, building cooperative learning environments, legitimizing personal experiences as a form of intellectual inquiry, and applying classroom learning to society. These approaches draw on themes of power, the community of learners, social responsibility and action, and emotions and feelings as central to learning. Data were drawn from a 1989-90 national survey of 35,478 faculty at 392 institutions. The data contained responses from full-time teaching faculty from every major type of institution. However, for the purpose of this study, two-year colleges were eliminated. This resulted in 29,961 respondents from 303 institutions. Data covered time spent on teaching, research, and administration; interactions with students; teaching practices and evaluation methods; perceptions of institutional climate; views and attitudes; sources of stress and satisfaction; and demographic and educational preparation. Results indicated that faculty background characteristics and faculty interests play a strong role in predicting the use of feminist pedagogical practices. The strongest predictor of the use of feminist pedagogical practice is being committed to student development regardless of gender. In addition, being a woman, being a liberal, or participating in a seminar to integrate perspectives of women and minority groups into the curriculum also predicted use of feminist pedagogical practice. (Contains 44 references.) (JB)

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BARRIERS TO AND FACILITATORS OF FEMINIST PEDAGOGY IN COLLEGE AND UNIVERSITY TEACHING

A Paper Presented at the Annual Meeting of the Association for the Study of Higher Education

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This paper was presented at the annual meeting of the Association for the Study of Higher Education held at the Doubletree Hotel, Tucson, Arizona, November 10-13, 1994. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

The purpose of this study was to identify elements within institutions of higher education that facilitate or inhibit the use of student-centered pedagogical practices derived from feminist theory. This study considered the characteristics and experiences of professors, such as personal background, teaching experience, and academic training. It also considered the role of the teaching environment such as institutional structures, and organizational climate.

The quality of undergraduate education has become the focus of a great deal of concern in recent years. Educators have identified problems in the teaching and learning process that include the impersonality of large classes, the lack of contact between faculty and students, and the emphasis placed on research over teaching (Astin, 1988; Bloom, 1987; Boyer, 1987; Hirsch, 1987; Katz, 1985; Menges, 1982). Further, they assert that many of the traditional teaching practices such as lecturing, isolated learning situations, and competition for grades are detrimental to student learning and development because such practices promote passivity in students, retard the sharing and developing of ideas, and limit students' critical analysis of course material. In contrast, they recommend student-centered teaching practices that motivate students to become active participants in their education, develop collaborative learning situations, increase student contact with faculty and peers, and replace standardized examinations with more informative (narrative) methods of evaluation.

Educational reforms using student-centered pedagogy have also been advocated by many alternative educational theorists. For example, the progressivists attempted to democratize education by emphasizing hands-on experiences, emotional and intellectual development, and student directed problem-solving (Dewey, 1966). In addition, humanistic education strives to engage the "whole person" in the learning process by incorporating affect into the cognitive process of learning (Jourard, 1971; May, 1953; Rogers, 1961). Humanistic educators use student-centered pedagogy, which promotes

self-initiation, integrates cognitive learning with affective-experiential learning, encourages self-evaluation, and taps students' natural desire to learn by making learning personally meaningful (Rogers, 1983). Furthermore, critical theorists of education examine the social, cultural, and economic relationship between education and society, with a goal to alter schools' role in reproducing social inequities (Friere, 1985; Giroux & McLaren, 1991). Many critical theorists advocate student-centered teaching practices such as working collectively, student selected topics, and the application of education to social action as a way of empowering students to transform society.

Another important form of alternative pedagogy is teaching practices based on feminist theory. Feminist pedagogy evolved primarily because the feminist scholarship that developed during the feminist movement needed a form of teaching to correspond with its democratic principles. It offers a teaching perspective that focuses on women and the internal and external factors that influence their personal and intellectual development. This educational model emphasizes teaching strategies that are student-centered and attempts to: democratize the classroom; build cooperative learning environments; legitimize personal experiences as a form of intellectual inquiry; and apply what is learned in class to reform society.

The literature on feminist pedagogy reveals four recurring themes addressing educational reform.

Power

Issues of power dominate the literature on feminist pedagogy. Many feminist educators have responded to the imbalance of power in traditional classrooms by promoting a liberatory or democratic classroom environment (Gardener, Dean & McKaig, 1989; Howe, 1975; Klein, 1987; Maher, 1987; Schniedewind, 1987; Shrewsbury, 1987). Howe's (1975) vision of a democratic classroom is one that operates in ways similar to feminist organizations which emphasize anti-elitism, leaderless groups, and collective

decision-making. The traditionally distinct roles of teacher as leader and student as follower are replaced with flexible roles of "teacher-student" and "student-teacher." Schniedewind (1983) encourages a democratic classroom by implementing participatory decision-making, asking for feedback about the class and the teaching methods, and inviting guest speakers or co-teaching the course.

A Community of Learners

Instead of the traditional view of power, feminist pedagogy emphasizes the concept of community. Bell (1987) describes community in the classroom as "a cohesive group working together to extend understanding" (p. 78). The importance feminist educators place on a sense of community in the classroom has its origins in several founding principles of feminist theory: egalitarian power relationships, sisterhood and consciousness-raising (Klein, 1987; Leck, 1987). These principles recognize and oppose the prevailing competitive nature of patriarchal relationships and institutions which have devalued or ignored cooperative structures.

Schniedewind endorses techniques such as peer support, group tasks, and research projects, or jigsaw format which require students to work in pairs or small groups and to assist each others' learning by giving feedback on individual work, reviewing discussion questions, contributing specific information, or working cooperatively on an assignment or project.

Social Responsibility and Action

Many feminist educators state that social responsibility and action are an integral part of feminist pedagogy because they foster a sense of agency and connect ideas to liberating action which keeps feminism alive, evolving, and changing to meet emerging needs of women's lives (Bell, 1987).

Several feminist educators offer examples of implementing social responsibility and action into the classroom. Schniedewind (1987) suggests that teachers encourage action by

using internships, or fieldwork. Shrewsbury (1987) encourages students to foster skills in leadership, organization, and public speaking which can help women become effective role models.

Emotions and Feelings as Central to Learning

Feminist pedagogy seeks to include an affective dimension to the teaching and learning process. To promote personal and academic learning, feminist educators have recommended raising issues that challenge students' values, encouraging students to look for connections between course content and personal experiences, assisting students in examining their own lives in the context of a larger social perspective, using journal writing, employing experiential activities and simulation games and including material that evokes feelings, such as poetry and songs .

In spite of the evidence supporting "student-centered" teaching practices, most professors continue to use traditional teaching methods (Blackburn, Pellino, Boberg, O'Connell, 1980; Eble, 1972; Thielen, 1987).

To explore potential facilitators and inhibitors of the use of feminist pedagogical practices empirical evidence was examined to identify educational aspects that influence teaching practices in general. For example, research on faculty characteristics that influence teaching methods has found gender (Milem & Astin, 1992), academic rank (Staham, Richardson and Cook, 1991), and "outsider" status (Merton, 1973) to be positive predictors of student-centered teaching practices. In addition, there is support suggesting that professors' teaching practices may be influenced by their professional interest in feminist issues since they are more likely to be aware of feminist teaching practices and the ways in which traditional pedagogy may be detrimental for student learning (Culley & Portuges, 1985; Klein, 1987).

Furthermore, institutional structures appear to influence the methods of teaching practices professors use simply by virtue of time spent, and commitment and interest in teaching. For example, faculty at research universities have consistently been shown to teach less and spend more time on research and publications (Bayer, 1973; Ladd, 1979). In addition, Feldman and Newcomb (1969) suggest that institutional size may influence teaching practices since they found small institutions to provide for more frequent and more meaningful teacher-student contact. Finally, Finkelstein (1984) asserts that institutional climate may influence the type of teaching practices used because climate may affect different norms for teaching practices and faculty-student contact.

METHODOLOGY

The following hypotheses were posed about professorial and institutional characteristics that promote the use of teaching practices grounded in feminist theory.

Hypothesis 1: Women faculty will be more likely to employ principles of "feminist pedagogy" than male faculty.
Rationale: Statham, Richardson, and Cook (1991) found that female faculty are more likely than male faculty to encourage students' input, independence, and active collaboration in the learning process. In another study, female science faculty were shown to use student-centered teaching practices more frequently than male science faculty (Milem & Astin, 1992).

Hypothesis 2: Faculty of lower professorial rank and lower social status will be more likely to use "feminist pedagogy."
Rationale: Research indicates that professors of lower professorial rank are more likely to deviate from social norms. This is due in part to the fact that individuals of low academic status typically have little or no reputation to lose if their innovation fails and may gain social recognition if their innovation succeeds (Mulkay, 1972). Findings from other studies suggest that individuals of "outsider" status are more likely to be innovative because they have alternative perspectives that can provide unique solutions (Gumport, 1987; Merton, 1973).

Hypothesis 3: Faculty's professional involvement with feminist issues will be a positive predictor of the use of "feminist pedagogy."
Rationale: Faculty who research and disseminate information about women's experiences are likely to be committed to feminist principles and aware of how to apply feminist principles in the classroom. Therefore, professors who research and write on issues concerning women will be more likely to use teaching practices that reflect feminist principles (Culley and Portuges, 1985).

Hypothesis 4: Institutional structures (e.g., type, size, selectivity) that promote greater faculty involvement in teaching will be positive predictors of professors' use of "feminist pedagogy."

Rationale: Educational researchers have suggested that institutional structures may influence teaching practices. For example, faculty at research universities have consistently been shown to teach less and spend more time on research and publications (Bayer, 1973; Ladd, 1979). In addition, Bowen (1977), Chickering (1971), and Feldman and Newcomb (1969) have all asserted that smaller institutions provide educational advantages to students because they tend to provide for more frequent and meaningful teacher-student contact and the use of teaching practices that engage students in active learning.

Hypothesis 5: Institutional climates that reflect faculty concerns for student development and a teaching orientation will be positive predictors of professors' use of "feminist pedagogy."

Rationale: Researchers have suggested that institutional climates may influence the type of teaching practices faculty use (Finkelstein, 1984). Mauksch (1981) suggests that an institutional climate is linked to teaching practices if it provides faculty with the social norms that emphasize teaching.

Data were drawn from a 1989-90 Faculty Survey covered questions about time spent on teaching, research, administration, about interactions with students, teaching practices and evaluation methods faculty use, their perception of the institution's climate, their views and attitudes, and sources of stress and satisfaction. In addition, the survey included demographic and educational preparation questions. The data were collected from a national sample of teaching faculty at 432 schools by CIRP at UCLA. Completed questionnaires were received from 51,574 faculty constituting a 55.2 response rate. Forty schools were dropped from the national database because of low response rates, resulting in 35,478 participants at 392 institutions (Please see Table 1). A multi-stage weighting procedure was conducted to approximate the results of what would have been obtained had all teaching faculty at all institutions in the nation responded to the survey. The data contained responses from full-time teaching faculty from every major type of institution. However, for the purpose of this study two-year colleges were eliminated. This resulted in 29,961 respondents from 303 institutions. In addition, the study utilized information on institutional structural characteristics such as type (public or private, college or university),

and size (based on student enrollment) obtained from the Higher Education General Information Survey (HEGIS) which is sponsored by the U.S. Department of Education.

Table 1
Institutional and Faculty Participation by Institutional Type, 1989 HERI Faculty Survey

	Institutions		Faculty	
Institutional Type	Total	Participating	Total	Respondents
Public universities	117	23	101,160	7,751
Private universities	69	11	36,782	2,229
Public four-year colleges	406	67	105,314	8,320
Private four-year colleges	938	202	69,922	11,711
All institutions	*1530*	*303*	*313,178*	*30,011*

Note: Adapted from Astin, Korn, and Dey, 1990.

Design of the Study and Analyses

The study employed blocked step-wise multiple regression as the statistical method of analysis using SPSSx software (SPSS, 1991). The independent variables were grouped into five "blocks" to approximate the order in which they occurred. The primary regression analysis included the entire data set of faculty. Since it was hypothesized that gender would influence teaching practices, additional regression analyses were conducted for subgroups of men faculty, and women faculty.

Dependent Variable

Because feminist pedagogy is an emerging area of research without established measures, a Feminist Pedagogy Scale was created as the dependent variable specifically for this study. The Feminist Pedagogy Scale is a summated rating scale consisting of 13 items (i.e., eight instructional practices, two evaluation techniques, two faculty goals for

undergraduate students, and one general activity.) To test for internal consistency an item-remainder coefficient (also referred to as the corrected-item-total correlation) was calculated which is the correlation of each item with the sum of the remaining items (Spector, 1992). A correlation of .25 was set as the minimum criterion for an item-remainder coefficient. Items with correlations below this criterion were eliminated from the Feminist Pedagogy Scale.

The coefficient alpha or reliability was also calculated to measure the internal consistency of the Feminist Pedagogy Scale. Coefficient alpha compares the variance of a total scale score (sum of all items) with the variances of the individual items. According to Nunnally (1978) in order for a scale to demonstrate internal consistency the coefficient alpha must be at least .70. The Feminist Pedagogy Scale has an alpha of .81 which exceeds Nunnally's criterion. Table 2 lists the items that met the criteria used in constructing the scale and their respective coefficients and alpha values.

The items representing instructional methods and evaluation techniques were scored on a four-point scale indicating the frequency of use in undergraduate courses (none, some, most and all). The items concerning faculty educational goals for undergraduates were also scored on a four-point scale but measured the degree of importance the goal held for the individual faculty (not important, somewhat important, very important, and essential). The final item asked faculty whether their research or writing had focused on women or gender issues and was scored on a two-point scale (yes, or no). Based on the value of the individual items and summing these values, the feminist pedagogy scale consisted of scores ranging from a low of 13 (suggesting that a professor used traditional instructor-centered teaching practices) to a high of 50 (suggesting that a professor used student-centered teaching practices associated with feminist pedagogy). Since the instructional technique, extensive lecturing, is contrary to feminist pedagogy its correlation is negative. However, the item was recoded by reversing the sign of the correlation so that it would not cancel or reduce the scale score.

Table 2
Reliability of the Feminist Pedagogical Scale

	Corrected Item-Total Correlation	Alpha if Item Removed
Cooperative learning	.6358	.7764
Student presentations	.5615	.7843
Group projects	.5385	.7870
Student evaluations of each other's work	.5225	.7888
Class discussions	.4538	.7942
Student-selected topics	.4541	.7947
Experiential learning/Field studies	.4350	.7960
Enhance students' self-understanding	.4109	.7977
Extensive lecturing	.3949	.7999
Readings on women/gender issues	.3673	.8012
Student-developed activities	.3730	.8011
Provide for students' emotional development	.3262	.8044
Research on women or gender	.2582	.8075

Alpha=.8079

Independent Variables

The first block to enter the analysis was comprised of input variables which provided information on the professors' background characteristics. The variables identified:

- Gender
- Racial/Ethnic background
- Age
- Father's education
- Mother's education
- Political identification (far left, liberal, moderate, conservative, far right)
- Liberalism Scale

The next block of variables entered comprised faculty's educational background and academic status including departmental affiliation and academic rank:

- Highest degree earned
- Year of appointment at present institution
- Tenure status
- Academic rank
- Department of current appointment

The third block of input variables included measures of professional orientation and involvement in issues concerning women:

- Taught a women's studies course
- Participated in a faculty seminar to integrate women's and minorities' perspectives into the curriculum
- Research orientation
- Commitment to students' personal development

The fourth block of variables included items measuring institutional characteristics:

- College type (private college, public college, private university, public university)
- College size (based on student enrollment)
- Institutional selectivity (based on student admissions test scores)
- College gender composition (women's colleges, men's colleges, or coeducational)
- College racial composition (historically black or predominantly white)

The fifth block of variables included factors created by aggregating faculty reported behaviors, values, or sources of satisfaction from each institution and, therefore, represented institutional climates. These measures were originally used by Astin (1993) for a study conducted to identify characteristics of teaching faculty that were likely to have an impact on undergraduate education. These factors were created by the use of an exploratory factor analysis on a set of items from the Faculty Survey. After a number of oblique rotations of the factor matrix, 21 factors (13 behavior and value factors and 8 perceptual factors) were developed. This study used 13 of the original 21 factors that were considered to be relevant to feminist pedagogical practices. In addition, these factors were used to represent individual faculty responses in the first and third blocks.

- Research orientation
- Faculty morale
- Faculty commitment to students' personal development
- Diversity orientation
- Liberalism
- Institutional social activism and community orientation
- Student orientation of faculty
- Positive perception of the administration
- Institutional diversity emphasis
- Lack of student community
- Institutional emphasis on resources and reputation
- Campus racial conflict
- Perceived academic competence of students

PREDICTORS IN THE USE OF FEMINIST PEDAGOGY

The first section reports the results of the multiple regression analyses for the entire sample. The next section focuses on separate regressions conducted for men and women faculty. Each section discusses the relative influence of the independent variables in each of the regression analyses.

The Use of Feminist Pedagogical Practices: All Faculty

A regression analysis for all of the faculty in the sample was conducted to assess the role of the independent variables in predicting the use of feminist pedagogical practices and to identify the need for separate analyses for subgroups. Table 3 presents a summary of the variables that entered the regression equation.

The Effects of Faculty Background Characteristics

Of the variables measuring background characteristics, being female was the first to enter the equation as a positive predictor of the use of feminist pedagogical practices. Being female had the highest simple correlation of the background characteristics with the dependent variable (r = .29), and the largest final beta (.11). Therefore, of the variables measuring background characteristics, it explained the greatest percentage of variance in the

Table 3
Regression for All Faculty
Variables are shown in the order that they entered the equation (N = 20,656)

Variable	Multi R	Simple r	B at Entry	B after controlling for: Bkgd. Char.	Educ. Bkgd.	Acad. Interr.	Instit. Char.	Instit. Climate
Background Characteristics								
Sex: Female	.2856	.29	29	26	17	11	11	11
Liberalism	.3227	.18	15	15	15	08	08	07
Race: African American	.3270	.08	06	05	04	00	00	(00)
Age	.3308	-.11	-06	-06	01	-03	-02	(-03)
Father's Education	.3322	.01	-01	-03	-01	01	01	(01)
Educational Background and Current Academic Status								
Departmental Appointment: Education	.3776	.20	17	18	11	08	08	08
Departmental Appointment: Math and Statistics	.4073	-.18	-17	-17	-21	-15	-16	-16
Departmental Appointment: Physical Sciences	.4299	-.18	-15	-14	-18	-13	-14	-14
Highest Degree Earned: Doctoral	.4418	-.16	-11	-12	-06	-03	-03	-04
Departmental Appointment: English	.4491	.11	10	08	02	02	01	(01)
Departmental Appointment: Fine Arts	.4575	.12	12	11	02	02	02	(02)
Year Appointed at Institution	.4643	.17	11	12	10	07	07	07
Departmental Appointment: Biological Sciences	.4678	-.09	-08	-08	-12	-09	-09	-10
Departmental Appointment: Engineering	.4715	-.10	-07	-06	-11	-08	-08	-07
Departmental Appointment: Technical	.4748	-.06	-05	-05	-09	-06	-06	-06
Departmental Appointment: History or Political Science	.4772	-.05	-04	-05	-10	-09	-09	-10
Departmental Appointment: Social Sciences	.4795	-.02	-02	-04	-10	-09	-09	-09
Departmental Appointment: Humanities	.4825	-.01	-01	-02	-08	-11	-11	-11
Departmental Appointment: Business	.4847	-.01	00	02	-06	-03	-03	-03
Academic Interests								
Commitment to Students' Personal Development	.6146	.50	47	46	40	39	39	39
Teaching Activity: Participated in women's/minority workshop	.6281	.26	22	20	18	12	12	11
Teaching Activity: Taught a women's studies course	.6314	.19	12	10	12	07	07	06
Research Orientation	.6343	-.04	01	-01	04	07	09	10
Institutional Structural Characteristics								
Total Student Enrollment	.6357	-.10	-09	-09	-09	-05	-05	(00)
Public Four-Year Colleges	.6362	.02	02	03	01	03	02	04
Institutional Climate								
Diversity Orientation	.6383	.12	09	07	08	06	05	03
Student Orientation	.6389	.13	11	11	11	05	06	04
Liberalism	.6394	.02	02	-03	01	04	05	05
Research Orientation	.6398	-.13	-10	-12	-10	-06	-03	-05
(R = .6398) (RSQ = .4094)								

Note: $p \leq .0001$ Note: Variables in parenthesis are no longer statistically significant.

dependent variable. Since previous research has indicated that women faculty are more likely to use teaching practices associated with feminist pedagogy such as student-centered teaching practices (Milem & Astin, 1992), and encouraging active participation in the classroom (Statham, Richardson, & Cook, 1991), it is understandable that being a woman would enter as a positive predictor.

One way to explore why women are more likely to use feminist pedagogical practices is by examining the beta coefficients for gender throughout the regression analysis. The beta coefficient for gender was reduced substantially (from .17 to .13) when being committed to students' personal development entered the equation. "Commitment to students' personal development" is a factor consisting of 10 faculty goals for undergraduates (e. g., help develop personal values, enhance out-of-class experience) and faculty personal goals (e. g., influencing social values, and developing a meaningful philosophy of life). The decrease in the beta coefficient indicates a high correlation between the two independent variables (a condition called multicolinearity). This high correlation means that the independent variables must share their predictive power which causes the beta coefficients for each variable to get smaller. This interpretation can be substantiated by examining the simple correlation between women and commitment to students' personal development ($r = .16$). Therefore, women faculty may be more likely to use feminist pedagogical practices because they are more committed to students' personal development than men faculty.

The next variable which entered the regression equation was a measure of faculty's liberalism. It was measured by a scale consisting of five belief items that reflect faculty's tendency to support liberal issues (e. g., a national health care plan, greater taxation of the wealthy, and legalization of abortions). This finding is consistent with work of Weiler (1988) who suggests that many alternative educational practices have been derived from liberal or radical sociological theories such as Marxism, critical theory, and feminism. Therefore, faculty who support liberal issues may be motivated to use teaching practices

associated with feminist pedagogy such as cooperative group work, and collective decision-making as a way to create a more democratic classroom. The beta coefficient for faculty liberalism declined once being committed to students' personal development entered the equation (from .15 to .11). This decline suggests that faculty who hold liberal beliefs are also more likely to support students' personal development which may be a way to develop more equitable teacher-student relationships. This in turn may increase their tendency to use feminist pedagogical practices.

The Effects of Educational Training and Current Academic Status

Twelve departmental affiliations entered the regression equation in the second block. However, only affiliation with an education department was a positive significant predictor of the use of feminist pedagogical practices. Departmental affiliation in education was an expected finding since faculty in education departments are more likely to be aware of the positive effects of teaching practices that engage students in active learning.

Nine of the remaining departmental affiliations were negatively associated with feminist pedagogy. Five of the departmental affiliations can be categorized as math and science (i. e., mathematics and statistics, physical sciences, biological sciences, engineering, and technical). The negative relationship between the use of feminist pedagogical practices and math and science departments is consistent with previous research criticizing the teaching of science for being male oriented, promoting competition for grades, alienating to non-scientists, and devoid of social context (Rosser, 1990; Tobias, 1990). In addition, Milem and Astin (1992) found that science and math faculty were less likely to use active learning methods such as class discussion and cooperative learning techniques and more likely to lecture and to grade on a curve which tends to intensify competition among students.

Departmental affiliation with history or political sciences, social sciences, humanities and business was also a negative predictor of the use of feminist pedagogical

practices. This finding is consistent with the work of Milem and Astin (1992) who found that faculty in history, political science, and social sciences are more likely than faculty in other disciplines to use teaching practices similar to faculty in math and science (i. e., lecturing and grading on a curve).

When analyzing the relationships between departmental affiliation and the use of feminist pedagogical practices it is difficult to determine why faculty in some departments are more likely to use these teaching practices than faculty in others. One possible explanation is that faculty who are committed to using teaching practices associated with feminist pedagogy are attracted to certain departments such as education. An alternative explanation is that a departmental climate may influence how faculty teach. For example, departments that tend to be competitive and driven by objective subject matter such as math and science have been shown to have faculty who use feminist pedagogical practices less frequently (Milem & Astin, 1992; Rosser, 1990; Tobias, 1990).

The year a faculty member was appointed to his or her current institution was a positive predictor of the use of feminist pedagogical practices (final beta = .07). In other words, faculty who are new to an institution are more likely to use feminist pedagogical practices. This finding has several possible explanations. First, appointment year is highly correlated with age (r = -.65) (The negative direction of the simple correlation indicates the younger the faculty the more recent the year of appointment.), not being tenured (r = .63), and being female (r = .22). Therefore, year of appointment may actually be measuring lower professional or social status. As discussed earlier, faculty of lower status have a tendency to use innovative teaching practices such as those associated with feminist pedagogy (Gumport, 1987; Merton, 1973). Another reason newer faculty may be more likely to use feminist pedagogical practices is that many faculty development programs that are designed to improve teaching are more likely to target newer faculty. Therefore, newer faculty may become more aware of effective teaching practices from their participation in these in-service training sessions. A final interpretation of this finding is that faculty who

have been recently appointed to an institution may not have been socialized to institutional norms that emphasize more traditional teaching practices.

Faculty who hold the doctoral degree were less likely to use feminist pedagogical practices. However, holding a doctoral degree may actually be measuring academic rank, and tenure status since there is a correlation between doctoral degree with full professor status ($r = .29$), and with not being tenured ($r = -.25$). Therefore, faculty who hold doctoral degrees may be less likely to use feminist pedagogical practices because they are of higher academic status. This interpretation is supported by previous research that found assistant professors more likely to adopt participatory teaching practices than full professors (Statham, Richardson & Cook, 1991).

Another possible explanation for this finding may be that faculty with high academic status may have achieved their status at the expense of developing their teaching skills. During the process of rising up the academic ranks faculty often must concentrate their best efforts where they are rewarded most. Since the reward structure of many universities emphasizes research rather than teaching (Blau, 1973) faculty of high academic status may have chosen to focus on research. Another explanation for the negative relationship between holding a doctoral degree and the use of feminist pedagogical practices is that individuals who study at the doctoral level are typically trained to be researchers rather than teachers resulting in many faculty having limited pedagogical experience. This interpretation can be supported by examining the simple correlation between holding a doctoral degree and research orientation ($r = .39$). Finally, faculty of higher rank may be less likely to use feminist pedagogical practices because they have spent more time in academe, and thus socialized to institutional norms that emphasize more traditional teaching practices.

The Effects of Academic Interests

Of all the variables that entered the regression equation being committed to student's personal development was the most significant predictor of feminist pedagogical practices after all other variables had entered the regression equation (final beta = .39). In addition, it had the highest simple correlation with the dependent variable (r = .50). This finding indicates that faculty who are committed to student development are most likely to use feminist pedagogical practices irrespective of individual characteristics and institutional structures.

One explanation for the strong positive relationship between commitment to students' personal development and feminist pedagogy is that many of the items that comprise this factor such as influencing social values, developing a meaningful philosophy of life, helping to develop personal values, and enhancing out-of-class experience are consistent with the goals of feminist pedagogy.

The second variable to enter the regression equation in this block measured a faculty's participation in a seminar to integrate women's and minority perspectives into the curriculum (final beta = .11). This finding was expected given that faculty who are interested in including the viewpoints of women and minorities into their courses would also be more likely to use feminist pedagogical practices. Although faculty self-select to participate in these types of seminars, it is also quite possible that such experiences have an impact on how faculty may design their syllabi and teach their courses.

The regression equation also showed that faculty who teach women's studies courses are more likely to use feminist pedagogical practices. This finding was expected since faculty who are committed to women's issues would be more likely to transfer their knowledge of feminism to teaching practices associated with feminist pedagogy.

There is an interesting and complex relationship between the research orientation of faculty and the use of feminist pedagogical practices. Research orientation is a factor measuring the degree to which faculty value and participate in research activities (e. g.,

numbers of publications, amount of time spent researching, and obtaining recognition from colleagues for contributions to one's field). The simple correlation between research orientation and the use of feminist pedagogical practices is negative (r = -.04) which suggests that faculty who are research oriented tend not to use feminist pedagogical practices. However, this relationship changes from a negative to a positive when holding a doctoral degree enters the regression equation (-.01 to .03). This "suppressor effect" (Astin, 1991) suggests that faculty who hold a doctoral degree tend to be research oriented. Support for this finding can be found by examining the simple correlation between holding a doctoral degree and being research oriented (r = .39). The next "suppressor effect" occurs when commitment to students' personal development enters the regression equation increasing the beta coefficient from .04 to .07. This finding suggests that among faculty of comparable commitment to students' personal development, being research oriented is associated with greater use of feminist pedagogical practices. Finally, when total student enrollment entered the equation the beta coefficient for research orientation increased (from .07 to .09) suggesting that faculty who are research oriented are more likely to work at larger institutions which also tend to be research oriented.

Unlike previous studies suggesting that teaching and research are mutually exclusive (Blau, 1973), this finding suggests that being research oriented is not necessarily a deterrent to using feminist pedagogical practices. Rather, faculty who are research oriented may conduct research that encourages them to use feminist pedagogical practices. In addition, faculty who are research oriented may be highly involved in their professional duties and, therefore, committed to teaching as well as research.

The Effects of Institutional Structural Characteristics

Of the variables measuring institutional structural characteristics only teaching at a public four-year institution remained as a significant predictor of feminist pedagogical practices (final beta = .04). Since four-year institutions tend to focus on undergraduate

education, there may be more opportunities for faculty to develop their teaching repertoire including student-centered teaching practices.

The Effects of Institutional Climate

Three institutional climate variables entered as positive predictors of feminist pedagogical practices. First, a measure of an institution's diversity orientation entered the equation (final beta = .03). This variable measures the degree to which an institution supports faculty research or writing on issues of gender or ethnicity and incorporating readings on gender and ethnicity into a course. It is quite possible that institutions that are supportive of issues concerning gender and ethnicity will attract faculty with similar interests. These faculty may be more likely to apply their interests of gender and ethnicity in the classroom by using teaching practices associated with feminist pedagogy. In addition, faculty who teach at a diversity oriented institution may be encouraged by the environment to use feminist pedagogical practices.

A measure of faculty's student orientation also entered the regression equation (final beta = .03). This variable is a factor that measures the degree to which faculty are interested in students' personal and academic problems and where there are amble opportunities for student-faculty interaction. Faculty who teach at institutions that are student oriented may be more likely to use feminist pedagogical practices because they place greater emphasis on the student.

Teaching at an institution that has a liberal climate is a positive predictor of the use of feminist pedagogical practices (final beta = .05). This variable is a factor consisting of five belief items reflecting faculty's tendency to support liberal issues and faculty's political orientation. Faculty at liberal institutions may be more likely to use feminist pedagogical practices since the environment supports more democratic teaching practices.

Finally, a negative predictor of the use of feminist pedagogical practices was teaching at an institution that is research oriented (final beta = -.05). This finding is

supported by studies that suggests institutions that emphasize research tend to place relatively little emphasis on teaching (Blau, 1973). One interpretation for this finding is that research oriented institutions may discourage faculty from using feminist pedagogical practices by imposing a competitive reward structure that values research.

A Comparison of The Use of Feminist Pedagogical Practices by Men and Women Faculty

Because gender entered as a significant predictor of feminist pedagogical practices in the initial regression, separate regressions were conducted for men and women. These regressions were undertaken in order to get a better understanding of the characteristics and experiences that influence the use of feminist pedagogical practices based on gender. Tables 4 and 5 present the results for men and women. Table 6 presents a summarized comparison of the two regressions. A detailed comparison of the regression results for men and women is presented based upon the block in which the independent variables entered into the equation.

A Comparison of the Effects of Faculty Background Characteristics for Men and Women

Similar to the findings of the initial regression analyses, being liberal entered as a significant predictor of feminist pedagogical practices for the separate regressions of men and women. The final beta for both groups was the same (.07). This finding suggests the being liberal is a positive influence on the use of feminist pedagogical practices regardless of a faculty's gender.

Table 4
Regression for Female Faculty
Variables are shown in the order that they entered the equation (N = 6,112)

Variable	Multi R	Simple r	B at Entry	B after controlling for Bkgd. Char.	Educ. Bkgd.	Acad. Interest	Instit. Climate
Background Characteristics							
Liberalism	.1713	.17	17	17	16	07	07
Educational Background and Current Academic Status							
Departmental Appointment: Math and Statistics	.2553	-.20	-19	-19	-17	-12	-12
Departmental Appointment: Education	.3065	.17	19	19	19	16	16
Departmental Appointment: Health Related	.3343	.10	12	12	12	10	11
Departmental Appointment: Biological Sciences	.3537	-.14	-13	-13	-11	-07	-08
Departmental Appointment: Physical Sciences	.3734	-.13	-13	-13	-11	-07	-08
Departmental Appointment: English	.3850	.10	08	08	10	08	08
Departmental Appointment: Fine Arts	.3949	.07	06	06	08	07	07
Year Appointed at Institution	.4049	.10	09	09	09	10	10
Departmental Appointment: Technical	.4101	-.09	-08	-08	-07	-04	(-04)
Departmental Appointment: Engineering	.4140	-.07	-06	-06	-06	-04	(-03)
Departmental Appointment: History or Political Science	.4166	-.05	-07	-07	-05	-05	-05
Academic Interests							
Commitment to students' personal development	.5537	.45	44	44	38	37	36
Teaching Activity: Participated in women's/minority workshop	.5668	.20	17	17	16	10	09
Teaching Activity: Taught a women's studies course	.5728	.16	12	12	13	09	08
Research Orientation	.5765	.07	03	03	04	07	10
Institutional Climates							
Research Orientation	.5790	-.07	-11	-11	-09	-07	-07
Diversity Orientation	.5811	.09	06	06	08	05	05
(R = 5811) (RSQ = .3377)							

Note: $p \leq .0001$
Note: Variables in parenthesis are no longer statistically significant.

Table 5
Regression for Male Faculty
Variables are shown in the order that they entered the equation (N = 14,544)

Variable	Multi R	Simple r	B at Entry	B after controlling for: Bkgd. Char.	Educ. Bkgd.	Acad. Interest	Instit. Char.	Instit. Climate
Background Characteristics								
Liberalism	.1515	.15	15	14	15	08	08	07
Race: African American	.1675	.08	07	07	05	01	01	(01)
Age	.1803	-.08	-07	-07	00	-03	-03	(-03)
Educational Background and Current Academic Status								
Departmental Appointment: Education	.2632	.18	19	19	13	08	08	08
Departmental Appointment: Fine Arts	.3051	.15	14	14	05	04	04	04
Departmental Appointment: Math and Statistics	.3364	-.17	-17	-17	-20	-15	-15	-15
Departmental Appointment: Physical Sciences	.3642	-.16	-16	-16	-19	-14	-15	-15
Highest Degree Earned: Doctoral	.3746	-.14	-16	-15	-07	-03	-03	-04
Departmental Appointment: English	.3845	.10	08	09	04	02	02	(02)
Year Appointed at Institution	.3918	.12	12	13	09	06	06	06
Departmental Appointment: Engineering	.3963	-.08	-07	-07	-11	-08	-08	-08
Departmental Appointment: Biological Sciences	.3990	-.06	-06	-06	-09	-08	-08	-08
Departmental Appointment: Technical	.4019	-.04	-03	-04	-07	-05	-05	-05
Departmental Appointment: History or Political Science	.4043	-.03	-05	-05	-09	-09	-09	-09
Departmental Appointment: Social Sciences	.4070	-.01	-03	-03	-08	-08	-08	-08
Departmental Appointment: Humanities	.4095	.00	-01	-01	-06	-10	-11	-11
Departmental Appointment: Health Related	.4116	-.02	-01	-01	-04	-04	-04	-04
Academic Interests								
Commitment to students' personal development	.5796	.49	48	49	43	42	41	41
Teaching Activity: Participated in women's/minority workshop	.5965	.24	22	22	20	14	13	13
Research Orientation	.5999	-.02	-04	-04	03	07	09	10
Teaching Activity: Taught a women's studies course	.6018	.11	09	09	09	05	05	04
Institutional Structural Characteristics								
Total Student Enrollment	.6035	-.11	-12	-11	-10	-05	-05	(-03)
Private Universities	.6042	-.06	-06	-06	-04	-03	-03	(-02)
Institutional Climates								
Liberalism	.6066	.01	-04	-03	01	05	06	08
Research Orientation	.6075	-.12	-15	-14	-10	-05	-01	-06
(R = .6075) (RSQ = .3690)								

Note: $p \leq .0001$
Note: Variables in parenthesis are no longer statistically significant.

Table 6
Comparison of Variables that Entered for Female & Male Faculty

Men and Women	Men	Women
Background Characteristics		
Liberalism (+)	Race: African American (+)†	
	Age (-)†	
Educational Background and Current Academic Status		
Dept. Appointment: Education (+)	Dept. Appointment: Social Sciences (-)	
Dept. Appointment: Fine Arts (+)	Dept. Appointment: Humanities (-)	
Dept. Appointment: Biological Sciences (-)	Highest Degree: Doctoral (-)	
Dept. Appointment: Technical (-)[1]		
Dept. Appointment: History or PoliSci (-)		
Dept. Appointment: Math and Statistics (-)		
Dept. Appointment: Physical Sciences (-)		
Dept. Appointment: Engineering (-)[2]		
Dept. Appointment: English (+)[3]		
Dept. Appointment: Health Related[4]		
Year Appointed at Institution (+)		
Academic Interests		
Commitment to Students' Personal Development (+)		
Participated in women's/minority workshop (+)		
Taught a women's studies course (+)		
Research Orientation (+)		
Institutional Structural Characteristics		
	Total Student Enrollment (-)†	
	Private Universities (-)†	
Institutional Climates		
Research Orientation (-)	Liberalism(+)	Diversity Orientation (+)

Note: $p \leq .0001$
† Variables are no longer statistically significant.

[1] Not significant for women faculty.
[2] Not significant for women faculty.
[3] Not significant for men faculty.
[4] Variable was negative for men but positive for women

A Comparison of the Effects of Educational Background and Current Academic Status for Men and Women

As Table 6 indicates, the use of feminist pedagogical practices for both men and women are influenced similarly by academic training and professional status. Although there are differences in departmental affiliations (i. e., social sciences, and humanities) that entered the equation for men and women, similar fields entered for each equation. However, one notable difference was that being in a health related department was a negative predictor for men faculty (final beta = -.11) but a positive predictor for women faculty (final beta = .11). This difference may be due to women and men concentrating in different fields within health related departments. For example, nursing and therapy are health related fields that tend to be female dominated and to focus on caregiving. As a result, faculty in these fields may be more likely to use feminist pedagogical practices. However, other health related fields such as surgery and medicine traditionally have been male dominated fields and tend to utilize competitive classroom practices.

One other difference in the variables that entered in this block was that holding a doctoral degree was a negative predictor for men but did not enter for women. This finding may be due to more men holding doctoral degrees. Support for this interpretation can be found by examining the simple correlation between sex and doctoral degree (-.19). Since the initial regression analysis indicated that men were less likely to use feminist pedagogical practices, the tendency for faculty holding a doctoral degree to use feminist pedagogy less frequently may be due to greater percentages of men having this degree. In addition, holding a doctoral degree may differentiate men faculty in terms of their academic status. As described earlier, faculty with higher status are less likely to use feminist pedagogical practices. However, holding a doctoral degree may not influence how women faculty teach since women tend to have lower status in academia regardless.

A Comparison of the Effects of Academic Interests for Men and Women

Faculty academic interests have a similar influence on the use of feminist pedagogical practices for both men and women (see Table 6). In comparing the results of the two regression analyses, there appear to be no systematic gender differences in the impact academic interests have of feminist pedagogical practices. Similar to the regression of all the faculty, being committed to student's personal development remained as the most significant predictor of feminist pedagogical practices after all other variables had entered the regression equation for men and women faculty. The simple correlations (men r = .49, women r = .45) and final betas (men beta = .41, women beta = .36) were similar for both groups.

Participating in a faculty seminar to integrate women's and minorities' perspectives into the curriculum was a positive predictor of the use of feminist pedagogy for both men and women. In addition, teaching a women's studies course was a positive predictor for both groups although the final beta for men faculty was considerably smaller than for women faculty (final beta for men = .04, final beta for women = .08). Although few men in this sample taught women's studies courses (only 2.2 %) those that did may be more open to using feminist pedagogical practices. It is also quite possible that the experience of teaching women's studies courses may encourage men faculty to use feminist pedagogical practices.

The one variable that differed for men and women in this block was being research oriented. This predictor variable had a positive simple correlation for women (.07) and remained positive through out the regression equation (final beta = .10) suggesting that women who are research oriented tend to use feminist pedagogical practices. A possible explanation for this finding is that women faculty may conduct research that is consistent with the goals of feminist pedagogy. Therefore, they may be more likely to transfer their research interests to classroom experiences including the use of feminist pedagogical practices. However, in the regression analyses conducted on men, being research oriented

followed a similar path as the total sample. The simple correlation was negative (-.02) but the beta coefficient became positive once holding a doctoral degree entered (.01), and increased again when commitment to student development (.07) and total student enrollment entered the equation (.09). This change in direction (from a negative to a positive) suggests that being research oriented is not a deterrent to using feminist pedagogical practices. Rather, men faculty who are research oriented may be more likely to use feminist pedagogical practices if they are committed to students' personal development.

A Comparison of The Effects of Institutional Structural Characteristics for Men and Women

Institutional structural characteristics appear to have different influences on the use of feminist pedagogy for men and women faculty. None of the variables measuring institutional structural characteristics entered the regression equation for women faculty. However, in the regression analysis conducted on men teaching at a large institution, and teaching at a private university were negative predictors of the use of feminist pedagogy. These two variables lost their significance once teaching at an institution that was research oriented entered the equation. This finding suggests that men faculty at large, private universities who tend not to use feminist pedagogical practices are more likely to be research oriented.

The Effects of Institutional Climate

Following the pattern of the regression analysis for the total sample, teaching at an institution that is perceived by the faculty as research oriented was a negative predictor of the use of feminist pedagogical practices for both men faculty (final beta = -.06) and women faculty (final beta = -.07). However, an environment that supports diversity orientation entered as a positive predictor for women faculty only (final beta = .05). Diversity orientation is a factor consisting of four items measuring academic interest in

issues of gender and ethnicity. Diversity orientation may have entered for women because women may be more likely to conduct research on gender and ethnicity and therefore, more likely to be attracted to institutions that support research on gender and ethnicity. It is also possible that women who teach at institutions that support a diversity orientation may be more likely than men to adopt feminist pedagogical practices. In the regression for men, teaching at an institution that was liberal had a negative beta at entry but became positive once doctoral degree entered and increased substantially when being committed to students' personal development entered (from .01 to .08). This suggests that for men faculty teaching at a liberal institution is not a positive influence on its own. Rather, being committed to students is a much greater influence.

Summary of Results and Discussion

These findings indicate that faculty background characteristics and faculty interests play a strong role in predicting the use of feminist pedagogical practices. The strongest predictor of the use of feminist pedagogical practices is being committed to student development regardless of gender. In addition, participating in a seminar to integrate women's and minority's perspectives into the curriculum also carried a significant discriminating weight. Being a woman and being liberal were the strongest background characteristics for all the groups examined. Furthermore, departmental affiliation in education was positive for all the groups, whereas math and statistics and physical sciences were negative for all the groups. Institutional structural characteristics and institutional climates tended to be less influential.

Testing of the Hypotheses

This section lists the study's hypotheses and reports the research findings addressing each hypothesis.

Hypothesis 1: Women faculty will be more likely to employ principles of "feminist pedagogy" than male faculty.

The results of the regression analysis of all the faculty indicate support for the hypothesis that women faculty will be more likely than men faculty to use feminist pedagogical practices. Of all the variables measuring background characteristics, being female explained the greatest percentage of variance in the dependent variable.

Hypothesis 2: Faculty's lower professional rank and lower social status will be a positive predictor of the use of "feminist pedagogy."

It was also hypothesized that faculty of lower academic rank and social status would be more likely to use feminist pedagogical practices than faculty of higher academic rank and social status. The findings support this hypothesis. Faculty who were more recent appointments, in other words newer faculty, were more likely to employ feminist pedagogical practices than faculty who had been at the institution for more years. In addition, faculty who held the doctoral degree as the highest degree were less likely to use feminist pedagogical practices and were more likely to be tenured full professors.

Hypothesis 3: Faculty's professional involvement with feminist issues will be a positive predictor of the use of "feminist pedagogy."

The results in all of the regression analysis indicated support for the hypothesis that faculty academic interests impact the use of feminist pedagogical practices. Participation in a seminar to integrate women's and minority's perspectives into the curriculum and teaching a women's studies course were positive predictors of the use of feminist

pedagogical practices in every regression equation. Surprisingly, being research oriented was a positive predictor of the use of feminist pedagogical practices in the regression of all faculty once being committed to students' personal development entered the regression equation. Of all the variables that entered the regression equations being committed to student's personal development was the most significant predictor of the use of feminist pedagogical practices. In addition, it had the highest simple correlation with the dependent variable in both subgroups.

Hypothesis 4: Institutional structures that promote faculty involvement in teaching will be positive predictors of professors' use of "feminist pedagogy."

It was initially hypothesized that institutional structures that promoted faculty involvement in teaching would be positive predictors of the use of feminist pedagogical practices. However, of the variables measuring institutional structural characteristics only teaching at a public four-year institution was a significant predictor of the use of feminist pedagogical practices in the regression analysis conducted on all faculty. Since four-year institutions focus more on teaching there may be more opportunities for faculty to develop alternative teaching practices. In addition, having a departmental affiliation in education was a positive predictor of the use of feminist pedagogy.

Hypothesis 5: Institutional climates that reflect faculty concerns for student development and teaching orientation will be positive predictors of professors' use of "feminist pedagogy."

Based upon previous research suggesting that an institutional climate is linked to teaching practices because it provides faculty with the social norms for teaching (Mauksch, 1981), it was hypothesized that institutional climates that reflect faculty concerns for student development and interest in teaching would be positive predictors of the use of

feminist pedagogy. There was support for this hypothesis. An institutional climate that promotes diversity, social activism, and liberalism were positive predictors in the use of feminist pedagogy. Finally, teaching at an institution that is research oriented was a negative predictor of the use of feminist pedagogical practices.

Limitations of The Study

One limitation of the study is that the survey was not originally designed to assess alternative teaching practices rooted in feminist theory. Rather, is was meant to gather information on faculty characteristics, roles, and educational practices. As a result the data do not contain some elements of feminist pedagogy that are often cited in the literature. For instance, the primary types of teaching practices absent from the survey are those that attempt to integrate affective and cognitive learning such as the use of integrative learning journals, role playing, simulation games, and encouraging students to look for connections between the course content and personal experiences. However, the feminist pedagogical goal of integrating cognitive and affective learning was approximated by using information on faculty's educational goals for undergraduates (e. g., "Providing for emotional development" and "Enhancing self-understanding").

Another limitation is that the design of the study does not lend itself to determining "cause-and-effect" relationships between the faculty characteristics or institutional characteristics and the use of feminist pedagogical practices. For example, it is impossible to determine whether a departmental or institutional climate led faculty to use certain teaching practices or whether faculty who subscribed to a particular ideology were more likely to seek environments that supported their beliefs.

Further, for the purposes of this study nearly 100 departmental affiliations were grouped into 14 larger fields to create a more manageable number of variables. However, by clustering the departments very diverse fields were combined making it difficult to interpret why certain departmental affiliations entered as they did. For example, the health

related field included speech therapy and surgery which are quite different departments with faculty in them who have very different perspectives. This may have contributed to having health related departmental affiliation entering positively for women faculty and negatively for men faculty.

Finally, the very nature of regression analysis requires several caveats when interpreting results (Astin, 1991). First, sample size influences the number of variables that enter a regression equation. The larger the sample size the greater the number of independent variables that will enter. Therefore, it is not surprising to find that the greatest number of independent variables entered the regression equations with the largest sample sizes (total faculty sample and sample of men faculty). In addition, when independent variables are highly correlated (a conditioned called multicollinearity) only one will enter the regression equation. The variable that enters may not be statistically more influential, rather it may be due to chance. It is hoped that the highly correlated variables are "proxies" for one another and their presence will have similar meaning.

Implications for Educational Practice

The results of these analyses provide information which might be used to improve educational practice. It is clear from these analyses that faculty who participated in workshops to integrate women's and minority's perspectives into the curriculum were more likely to use feminist pedagogical practices regardless of gender or type of institution. These findings suggest that colleges and universities might want to consider offering greater opportunities for faculty in-service training sessions on curriculum integration. In addition, it may also be beneficial to provide in-service training on other topics including effective instructional techniques such as those associated with feminist pedagogy. Because faculty typically self-select to participate in these types of seminars, institutions may want to encourage faculty to participate by offering incentives.

Because departmental affiliation appeared to have the strongest association with the use of feminist pedagogical practices of any of the environmental measures, institutions may want to explore further the teaching practices used in various disciplines. This information could be useful in identifying departments with the greatest need for improvement and learn from those that employ such practices. For example, math and science departments which were shown to have the strongest negative associated with the use of feminist pedagogical practices may want to evaluate how their faculty teach and develop training programs. Assistance in teaching reform may come from faculty colleagues in departments that currently use feminist pedagogical practices such as education departments.

Although measures of institutional climates did not carry the weight that was initially hypothesized, they did have predictive power. This finding suggests that college environments have an important role in affecting the teaching practices of faculty and can be helpful in planning institutional responses to undergraduate education. For example, since institutions that place an emphasis on the development and welfare of students have been shown to use feminist pedagogical practices, it might be beneficial for institutions to encourage student-faculty interaction by having faculty residents in dormitories, designing smaller classes particularly for freshmen and sophomores, and including effective teaching into the reward structure.

Suggestions for Future Research

One area of research that merits future study is developing a better way to operationalize feminist pedagogy. An alternative approach to assess feminist pedagogy may be to create individual measures that more closely represent the four themes of feminist pedagogy (e. g., balancing power in classroom relationships, developing a community of learners, encouraging social responsibility and action, and integrating cognitive learning and affective development). For example, the redistribution of power could be measured

by instructional techniques such as student presentations and student-selected topics as well as faculty support of politically liberal issues. In addition, the concept of developing a sense of community in the classroom could focus on instructional techniques such as cooperative learning, and group projects. Next, the application of knowledge for social responsibility and action could be measured by experiential learning/field studies and the institutional goal of encouraging students to apply what they have learned in the classroom to improve society. Connecting cognitive and affective learning could be measured by items such as providing for students' emotional development and faculty interest in students' personal and academic problems. These new measures would be more specific and would more closely resemble the theoretical definition of feminist pedagogy. As a result, we may better understand if certain aspects of feminist pedagogy are more likely to be accepted or rejected by faculty and institutions.

On a similar note, since commitment to students' personal development was by far the strongest predictor of the use of feminist pedagogical practices, this construct may warrant future study. Was the strong relationship due to faculty's feminist beliefs, or adherence to other ideologies? Further, are there individual items within the measure of commitment to students' personal development that contribute more than others in predicting the use of feminist pedagogy? By examining in greater depth the relationship between commitment to students' personal development and teaching practices, we might better understand the use of feminist pedagogy.

In addition, the findings regarding the effects of institutional climates on the use of feminist pedagogical practices provide us with clues as to the types of institutions which seem to place a higher priority on these teaching practices. Additional research which examines institutional climate seems warranted based upon these findings. One possible way to determine how institutional climates affect the use of feminist pedagogical practices is to further study institutions where this type of teaching is common. Therefore, studies

of these types of institutions may help to identify faculty and institutional characteristics that may contribute to the high proportion of faculty using feminist pedagogical practices.

Conclusion

This study addressed the importance of student-centered teaching practices that are associated with feminist pedagogy. As mentioned earlier, many educational experts have advocated these teaching methods for the educational benefits they offer (e.g. empowering students and teachers, encouraging the creation and critique of knowledge, and promoting lifelong learning). Feminist educators have also endorsed these teaching practices not only for their academic merit but also as a way to correct many social and cultural inequities. It is hoped that findings from this study will shed some light on sources of resistance to and promotion of these beneficial teaching practices and will encourage their greater use.

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